IDRC FEATURE

CANADA

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A monthly features service about science, technology, and development

(Approx. 630 words) IDRC-F277e

SCANIA BEETLES FEAST ON TANZANIA'S GRAIN

by John Mkamwa

TANZANIA, IDRC -- When the pest was first spotted by peasants in a remote village in western Tanzania, it was nicknamed "scania". The farmers thought the insect resembled Scania trucks from Sweden which are common in Tanzania.

That was in March 1981. The cylindrical, brown beetles have since destroyed thousands of tons of grain in 12 of Tanzania's 20 regions. The destruction is likely to spread not only to the remaining parts of the country but also to neighbouring eastern and central African states.

The beetle, previously unknown in the country, has been identified as the grain borer Prostephanus truncatus. It is known to occur in South America, Central America and the extreme south of the United States. Entomologists say the pest belongs to the family of bostrichidae and that most of the species in this group are wood borers.

According to the Tropical Products Institute (TPI) of London, the scania beetle (Prostephanus truncatus) is very similar but slightly larger than the lesser grain borer Rhyzopertha dominica. Although in Tanzania the pest has so far proved destructive to maize, sorghum and cassava, both the adult beetle and larva will damage a wide range of crops including various roots and tubers, cereals, pulses, cocoa, coffee beans and groundnuts. It is also reported to damage wooden structures and utensils.

The TPI reports that infestation of maize may begin shortly before harvest and continue throughout storage. The beetle favours warm conditions and

moderate humidity. Development from egg to adult takes approximately 27 days. The adult gains entry through the sheaths of leaves covering the maize cobs and then destroys the grains by boring from one to the next.

The extent of the grain damage already caused by scania is not yet known. However, it is estimated that maize damage can be from 80 to 95 percent in smallholder granaries. According to the Ministry of Agriculture, the spread of the pest puts in danger about half of Tanzania's annual maize production of 1 500 000 tons. After three to six months' storage of maize cobs on some Tanzanian farms, TPI reports, weight losses as high as 33 percent were recorded, with an average of approximately 10 percent. These losses may exceed by far those caused by other storage pests of maize such as the angoumois grain moth (Sitotroga cerealella) or the maize weevil (Sitophilus spp.) under similar conditions.

A farmer from the Tabora region says that scania has destroyed the entire maize crop of a large number of homesteads. As a result, some farmers do not have seed for planting.

The TPI fears that scania has not reached its full devastating potential and may spread from Tanzania into other regions of Africa. It is therefore important that extension workers and inspectors of maize and other farm produce throughout eastern and central Africa be aware of the dangers of scania.

Little work has been carried out on control of the pest. A number of chemicals have been used in attempts to destroy the beetle but success has been minimal. The first chemical recommended, "Actelic 2%", not only proved useless but scania also made a meal of it.

A research centre has been set up with the help of scientists from TPI to find a solution to scania. Preliminary laboratory investigations at TPI indicate that the chemicals permethrin and pirimiphos methyl could provide protection for maize. As the beetle breeds better in maize cobs than in loose

grain, farmers are advised to shell all their grain before treating it.

If insecticides are not available to the farmers, say TPI scientists, they should spread the grain out in the sun in a thin layer or store the grain in drums covered with a 10 cm barrier of ash or sand.

Researchers are also examining methods of combatting scania by using inexpensive local materials. These include mixing grain with tobacco dust and cotton seed oil. But it will need the combined efforts of the researchers, farmers and government to stop the scania menace in Tanzania and neighbouring countries.

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February/March 1984